Benjamin La Borde

current / Amps

p = pulse duration = T / 3

T = time of one cycle = 1 / f

f = drive frequency in Hz

f = c / (3 a) where a = segment length = plate separation in metres

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of

different scales. Typical values for 'a' would range from 1 cm to 1 km

For example, if a = 1 cm, ie 10^{-2} m, then
f = 3 x 10^8 / (3 x 10^{-2}) = 10^{10} Hz, ie 10 GHz
T = 1 / 10^{10} = 10^{-10} seconds, and p = 10^{-10}/3 seconds

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+

FIG 2: phasing chart

Plate 1

current / Amps

waveform W1

time
(units see below)

current / Amps

waveform W2

time
(units see below)

$T = 1 / f$ T T

p p p

Plate 2

p = pulse duration = T / 3
T = time of one cycle
f = drive frequency in Hz
f = c / (3 a) where a = segment length = plate separation in metres

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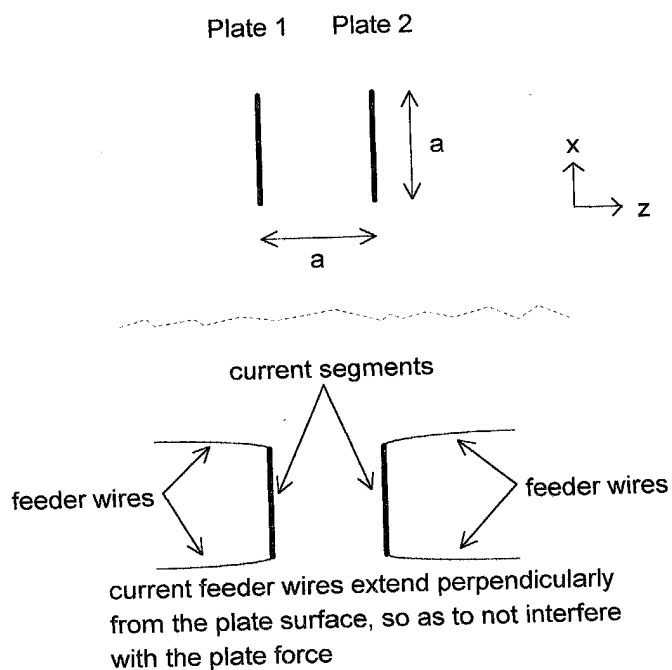T = 1 / 10^{10} = 10^{-10} seconds, and p = 10^{-10}/3 seconds

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Plate 1   Plate 2

a

x

z

a

current segments

feeder wires   feeder wires

current feeder wires extend perpendicularly
from the plate surface, so as to not interfere
with the plate force

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales.
Typical values for 'a' would range from 1 cm to 1 km

Plate 1   Plate 2

$\sqrt{15}\,a$

$\simeq 3.873a$

$4a$

$\sqrt{15}\,a$

$\simeq 3.873a$

$4a$

a

a

x

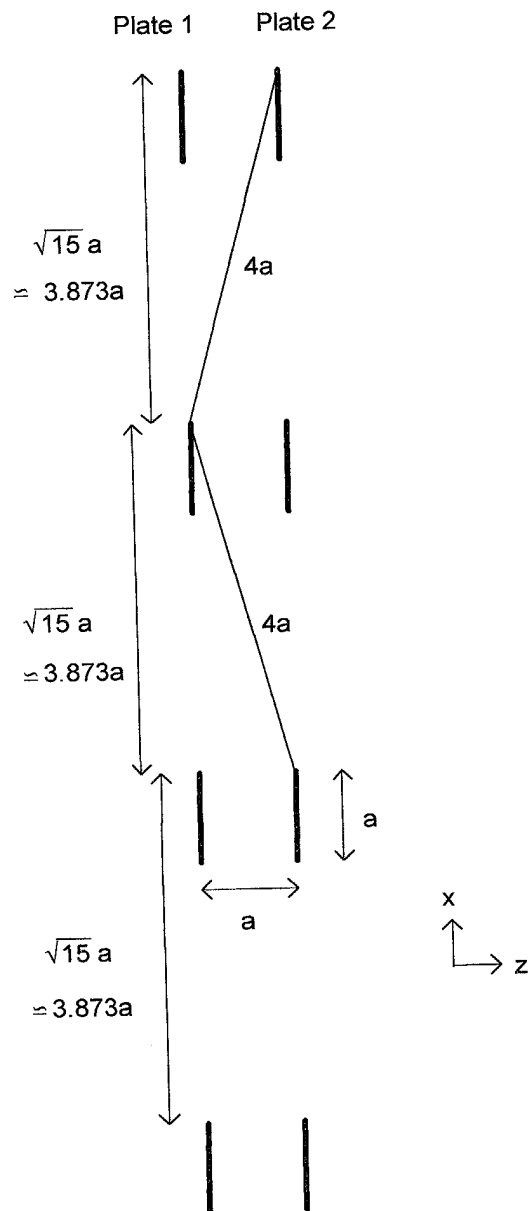z

$\sqrt{15}\,a$

$\simeq 3.873a$

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales. Typical values for 'a' would range from 1 cm to 1 km

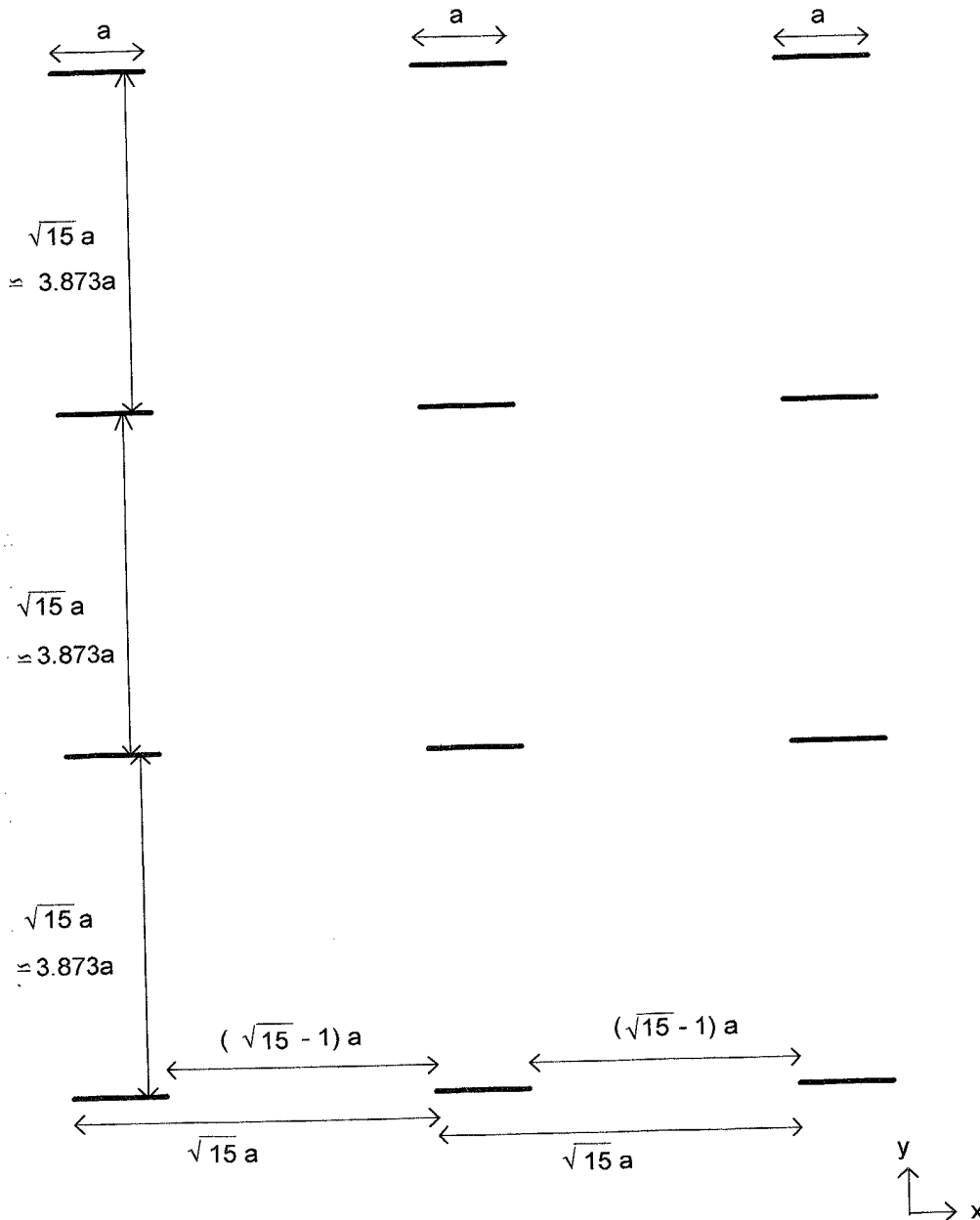Benjamin La Borde

FIG 5: x and y separations in a single plate

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales. Typical values for 'a' would range from 1 cm to 1 km

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FIG 6: z and y separation in two plates

Plate 1   Plate 2

$\sqrt{15}\,a$

$\simeq 3.873a$

each dot depicts a
cross-section of a
single segment
(8 in this diagram)

$\sqrt{15}\,a$

$\simeq 3.873a$

$\sqrt{15}\,a$

$\simeq 3.873a$

a

y

z

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales.
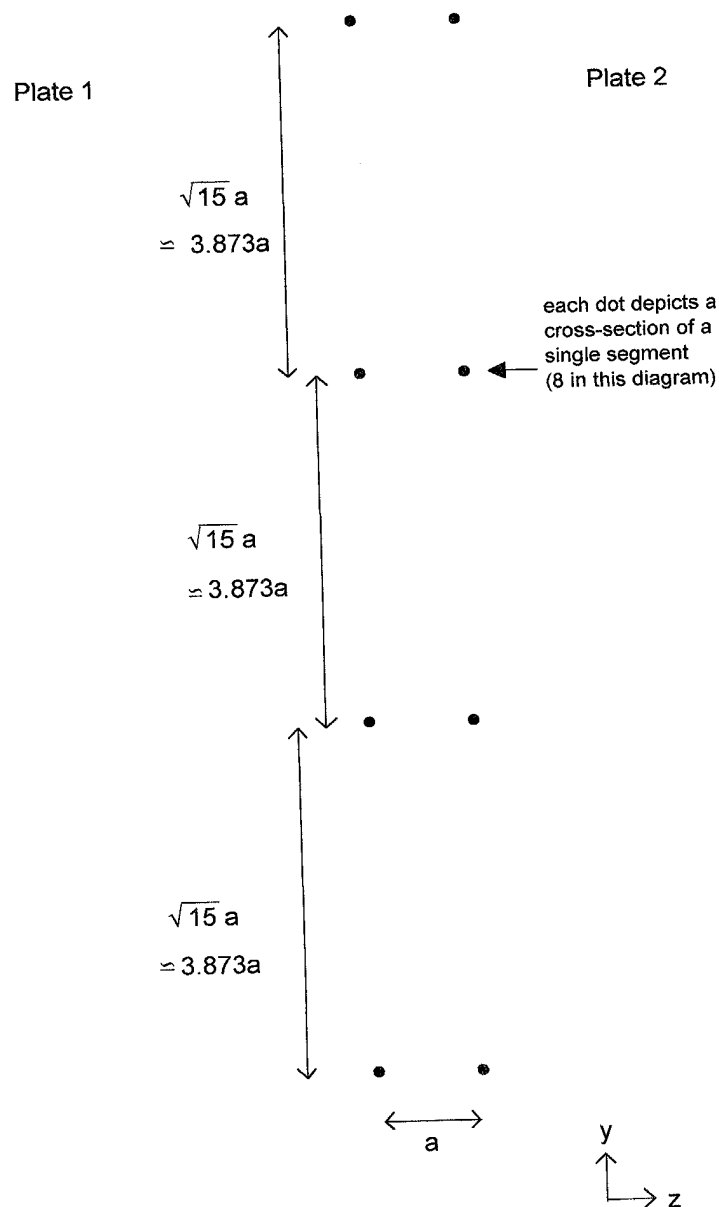Typical values for 'a' would range from 1 cm to 1 km

+

FIG 7: perspective view of the two plates

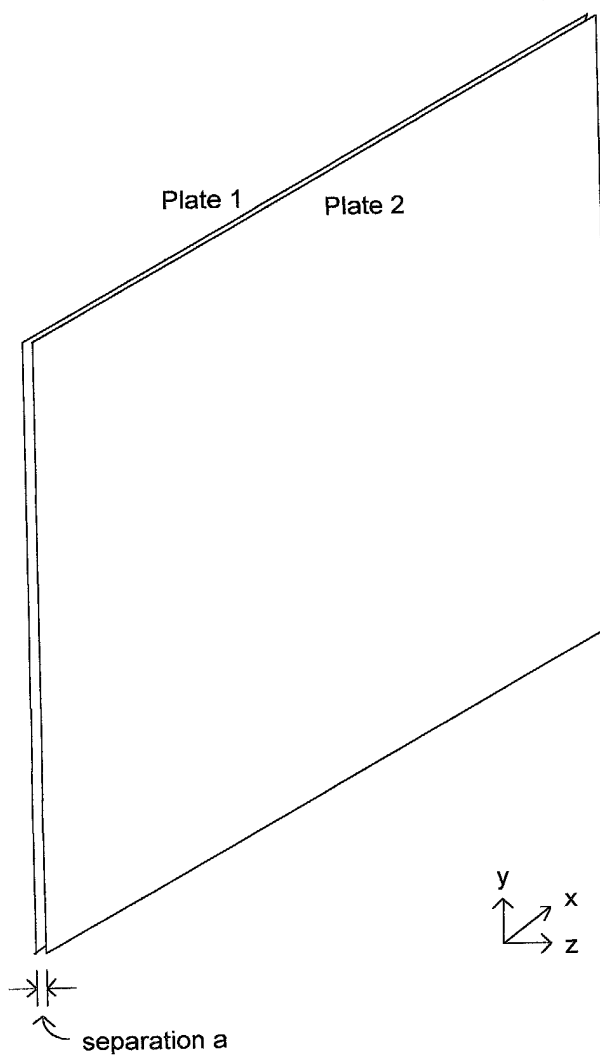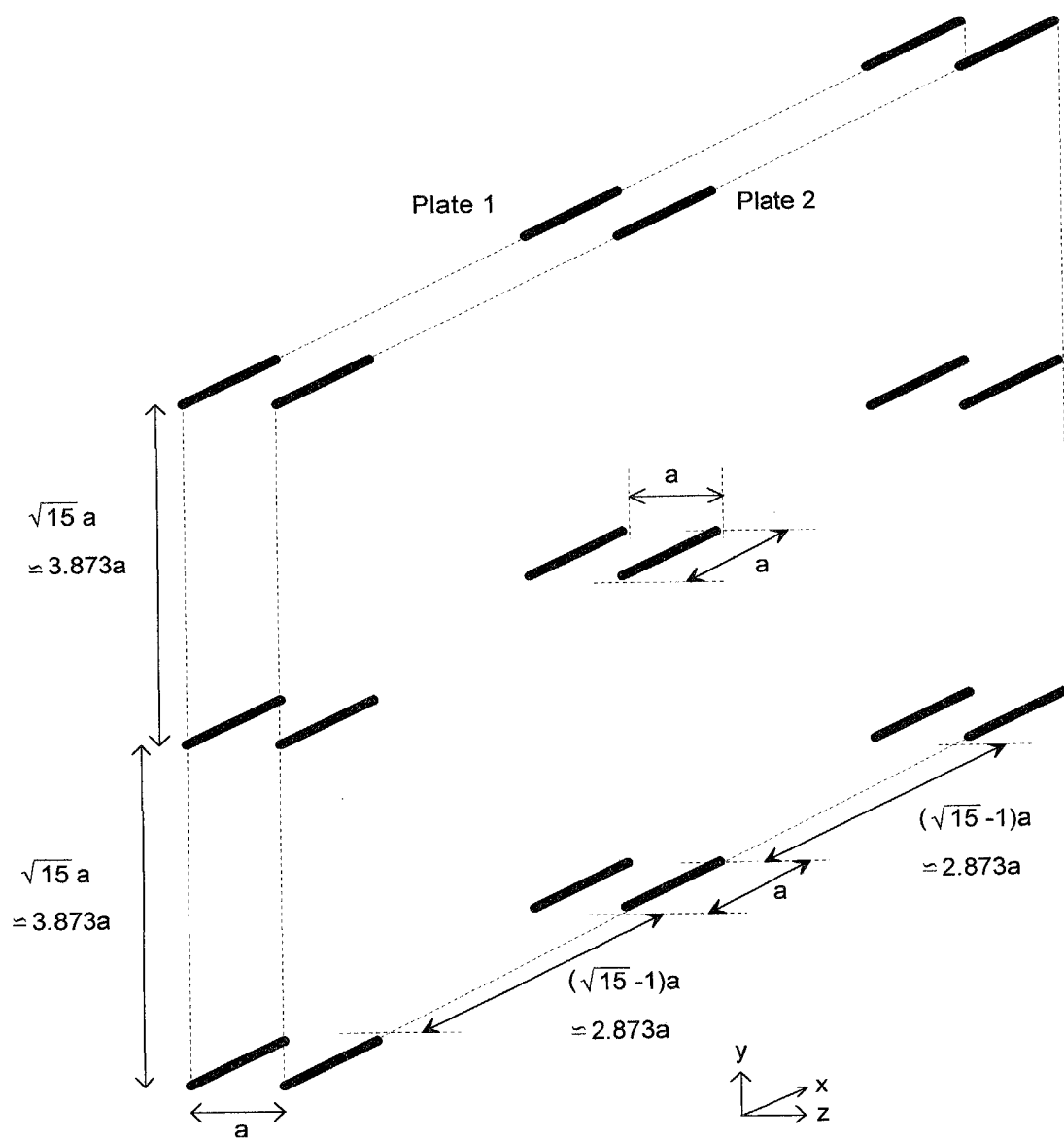Plate 1   Plate 2

y
x
z

separation a

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales.
Typical values for 'a' would range from 1 cm to 1 km

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs
of different scales. Typical values for 'a' would range from 1 cm to 1 km

Plate 1   Plate 2

$\sqrt{15}$ a

$\simeq 3.873a$

a

a

$\sqrt{15}$ a

$\simeq 3.873a$

$(\sqrt{15}-1)a$

$\simeq 2.873a$

a

$(\sqrt{15}-1)a$

$\simeq 2.873a$

a

y

x

z

FIG 9: m-n segment distance relationship

a

Segment (m, 0)

Plate 1

Plate 2

$\sqrt{15}\,a$

$\cong 3.873a$

each dot depicts a
cross-section of a
single segment
(8 in this diagram)

discontinuity in z
for illustrative purposes

$A = \sqrt{1 + 15\,n^2}\;a$

$n\sqrt{15}\,a$

segment (m,n)

a

y

z

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales.
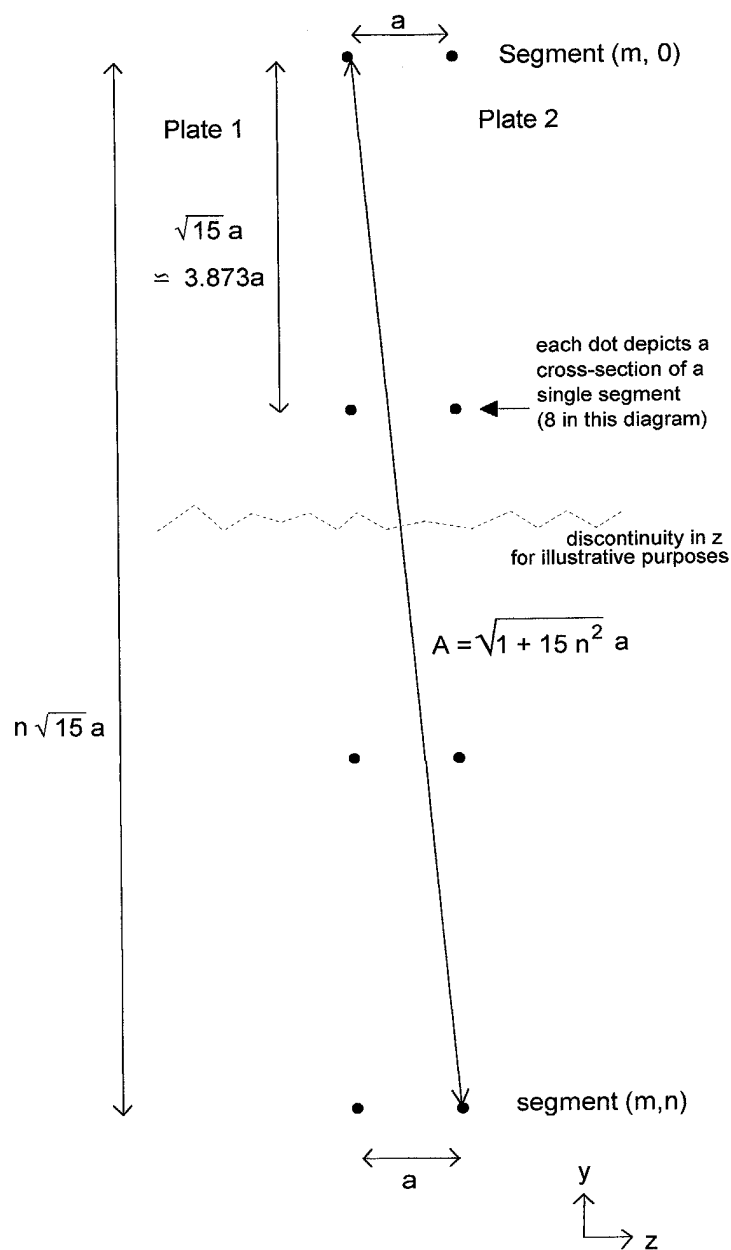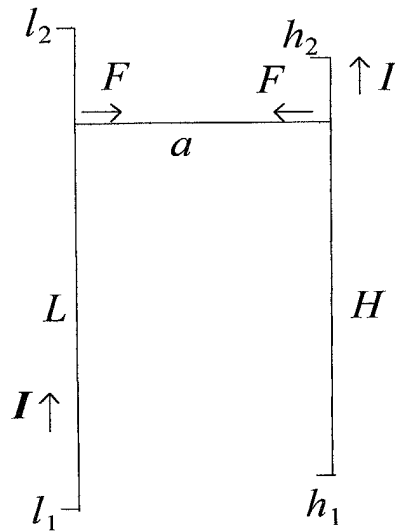Typical values for 'a' would range from 1 cm to 1 km

l_2 $\quad$ h_2

F $\qquad$ F $\uparrow I$

$\rightarrow$ $\qquad\qquad$ $\leftarrow$

a

L $\qquad\qquad$ H

$I \uparrow$

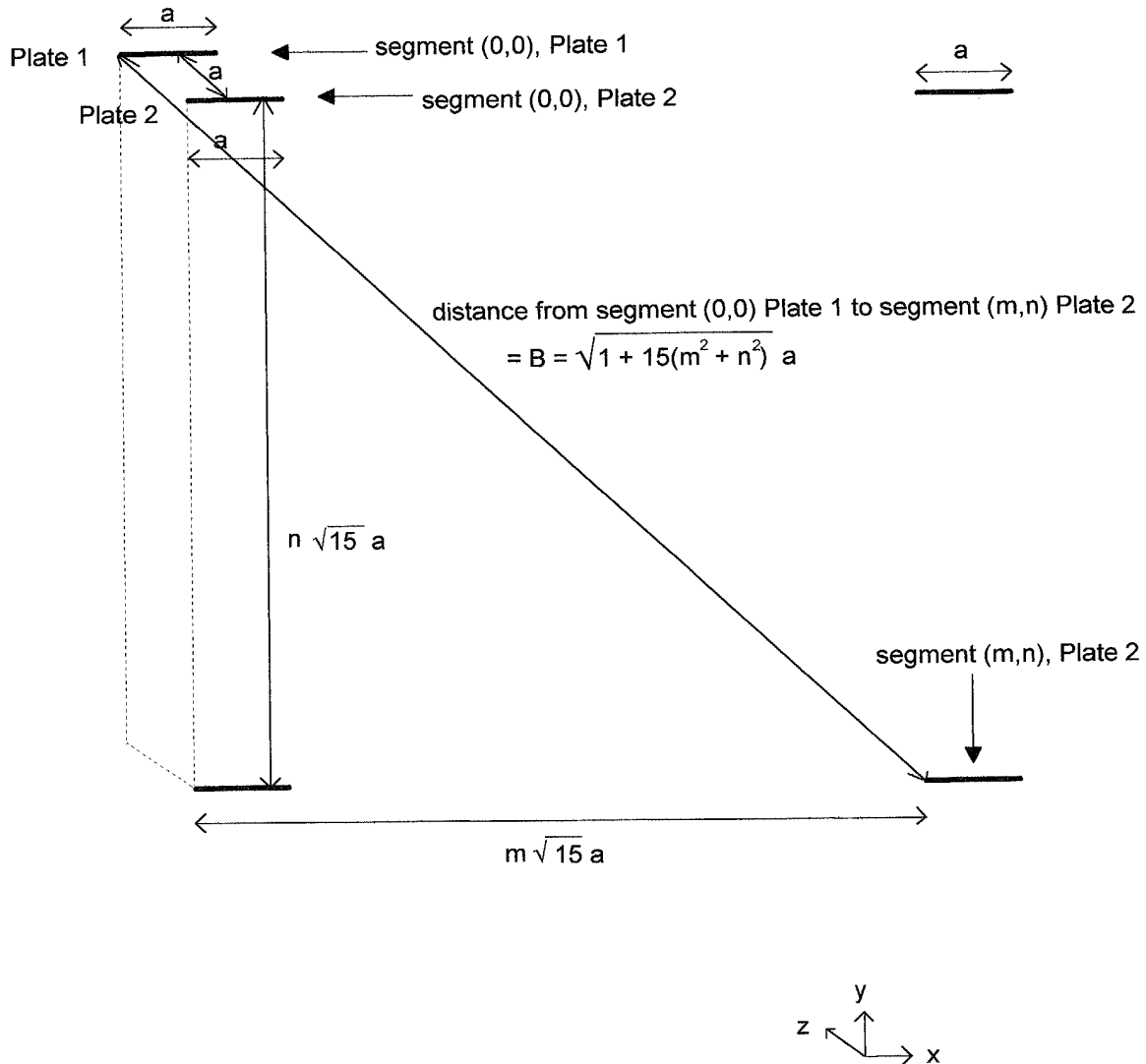l_1 $\qquad\qquad$ h_1

I current in the wires

In this theoretical description, the values of a, h_1, h_2, l_1, l_2 and I are variable

FIG 11: Plate 1 (0,0) to Plate 2 (m,n) segment distance, B

Plate 1 — a

segment (0,0), Plate 1

segment (0,0), Plate 2

Plate 2

a

distance from segment (0,0) Plate 1 to segment (m,n) Plate 2

$$= B = \sqrt{1 + 15(m^2 + n^2)}\ a$$

$n\sqrt{15}\ a$

segment (m,n), Plate 2

$m\sqrt{15}\ a$

y
z ← ↑ → x

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales. Typical values for 'a' would range from 1 cm to 1 km

FIG 12: timing differences

Explanation of time units

p = pulse duration = $T / 3$, T = time of one cycle = $1 / f$, f = drive frequency in Hz
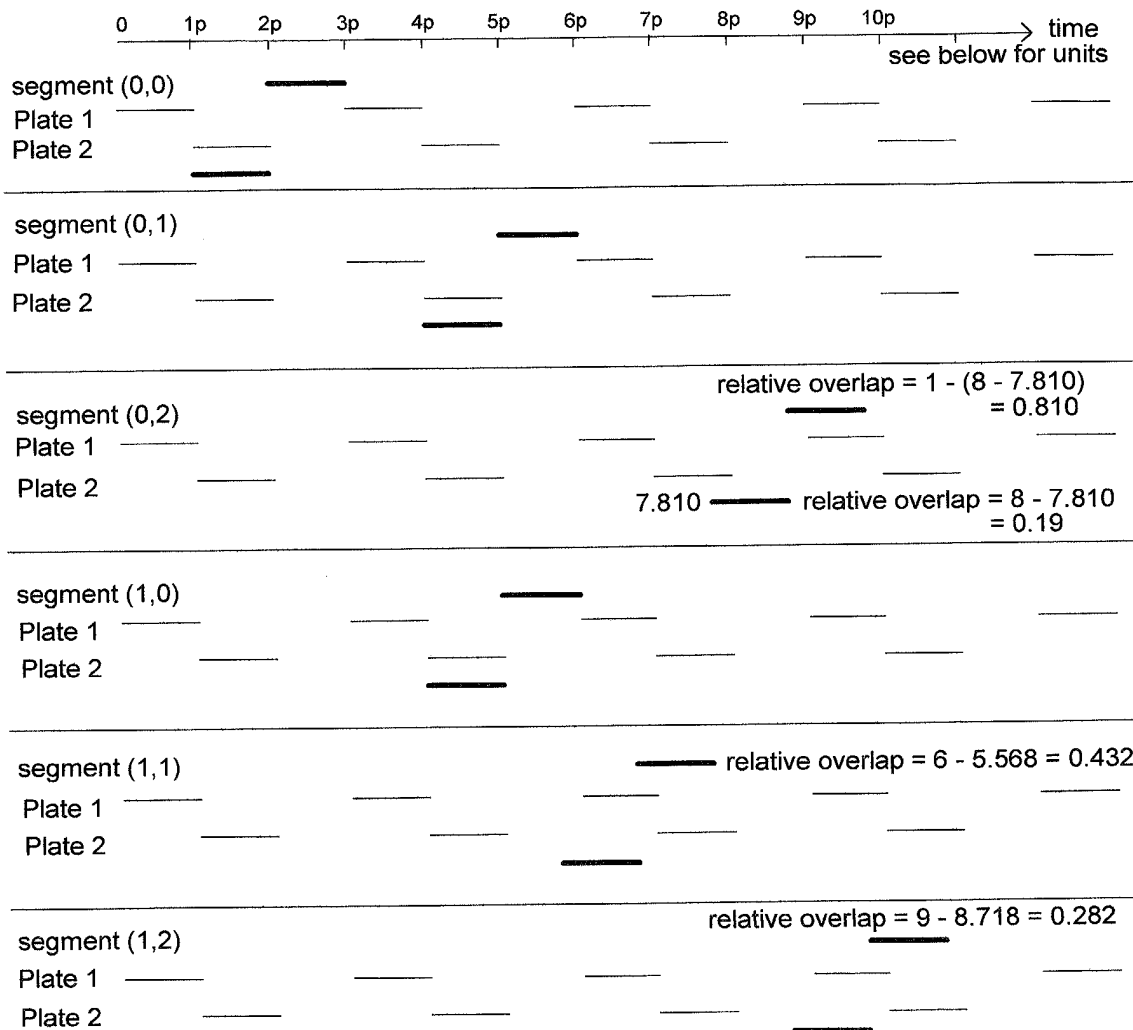$f = c / (3a)$ where a = segment length = plate separation in metres

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales.
Typical values for 'a' would range from 1 cm to 1 km

For example, if a = 1 cm, ie 10^{-2} m, then
$f = 3 \times 10^8 / (3 \times 10^{-2}) = 10^{10}$ Hz, ie 10 GHz
$T = 1 / 10^{10} = 10^{-10}$ seconds, and $p = 10^{-10}/3$ seconds

Note: due to the Plate 2 phase shift of p, the Plate 1 arrival times are delayed (right-shifted) by p
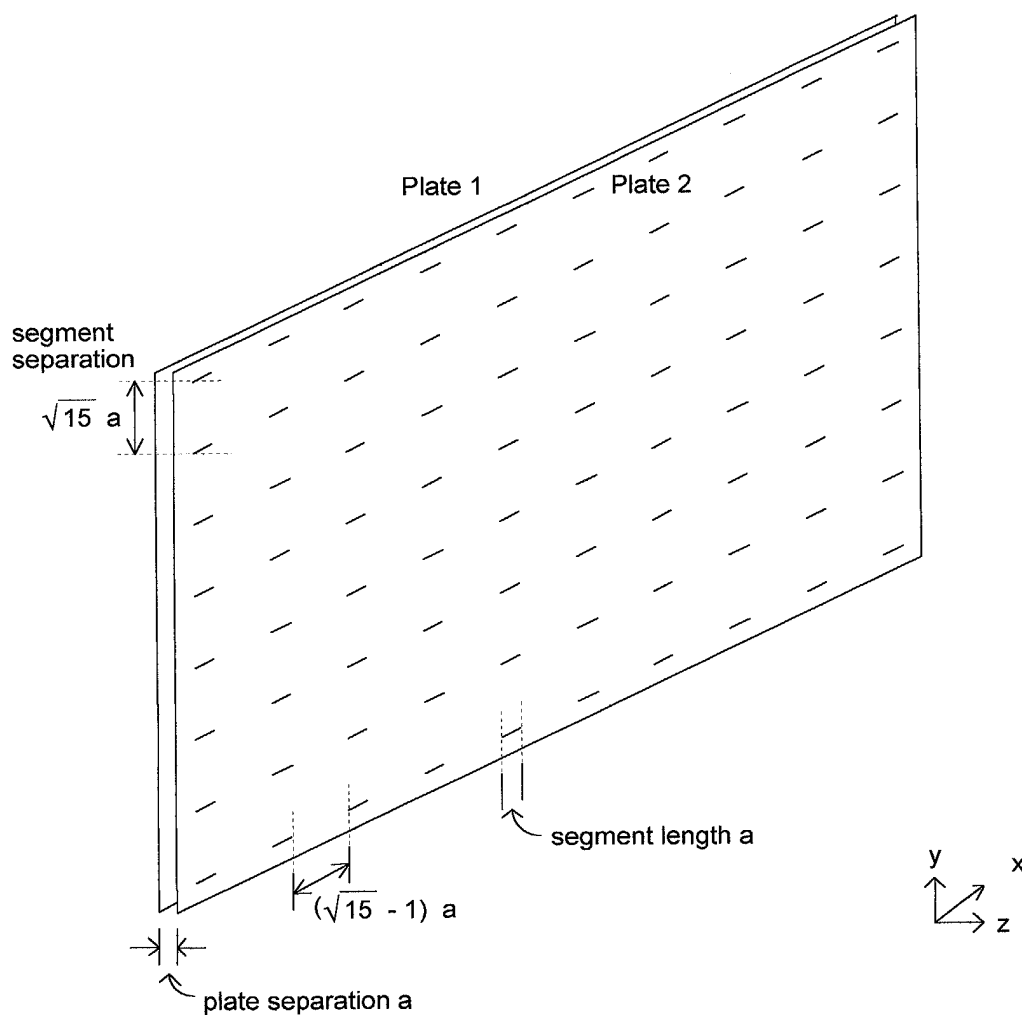
Plate 1   Plate 2

segment
separation

$\sqrt{15}\ a$

segment length a

$(\sqrt{15} - 1)\ a$

y   x
z

plate separation a

Distance 'a' is fixed for a particular SCAM, but is flexible to support SCAMs of different scales.
Typical values for 'a' would range from 1 cm to 1 km

$$l_2 \qquad\qquad h_2$$
$$\delta F_x \qquad \uparrow v$$
$$a \quad \theta \quad \delta h \qquad — h$$
$$\lambda_{e_H}, \lambda_{p_H}$$
$$\delta F$$

$$l \qquad\qquad L \qquad r \qquad H$$

$$v\uparrow$$
$$\delta l \quad \lambda_{e_L}, \lambda_{p_L}$$
$$l_1 \qquad\qquad h_1$$

λ_{eL}	electron density in L
λ_{pL}	proton density in L
λ_{eH}	electron density in H
λ_{pH}	proton density in H
v	electron velocity
δl	short current segment in L
δh	short current segment in H

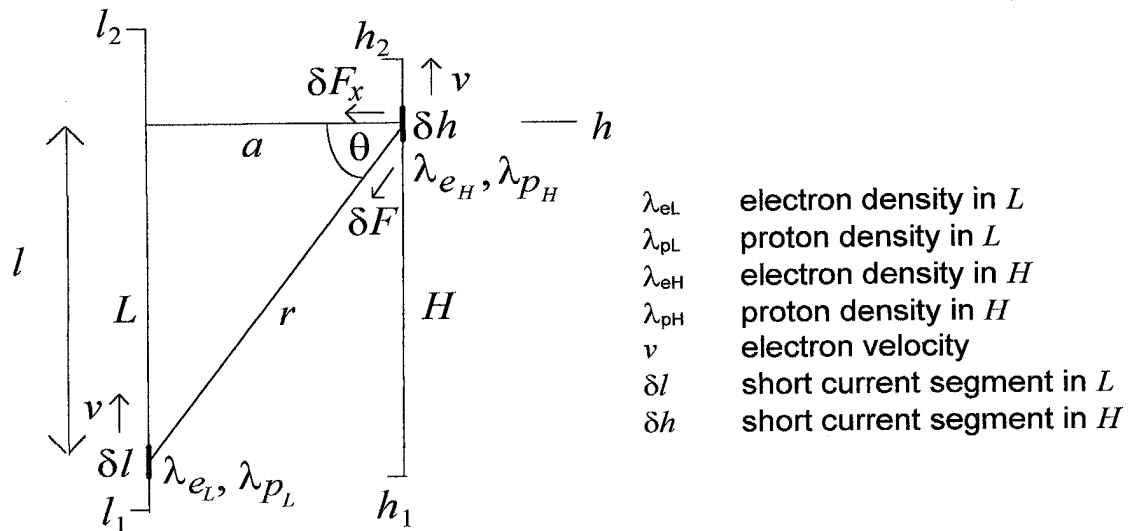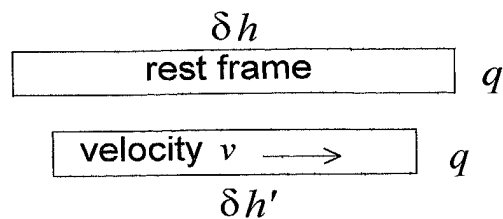FIG 15   Lorentz length contraction

$$\delta h$$

rest frame	q

velocity $v \longrightarrow$	q

$$\delta h'$$